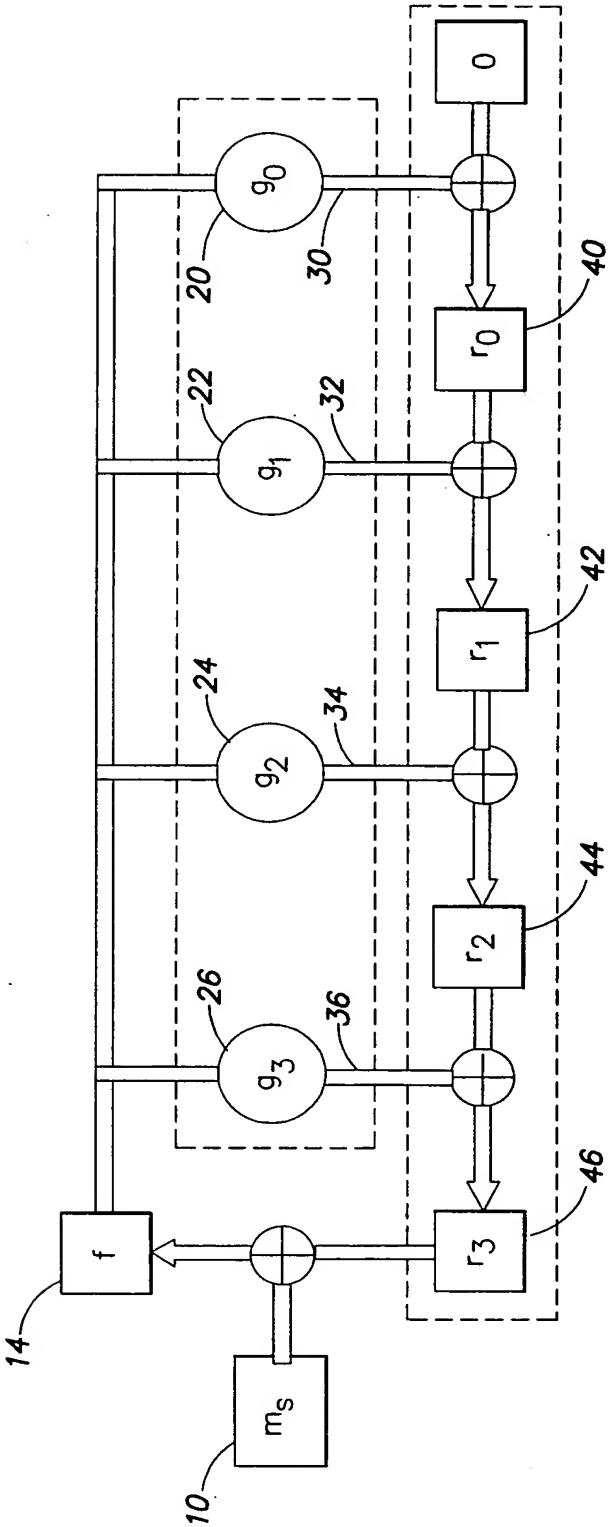


FIG. 1
(Prior Art)

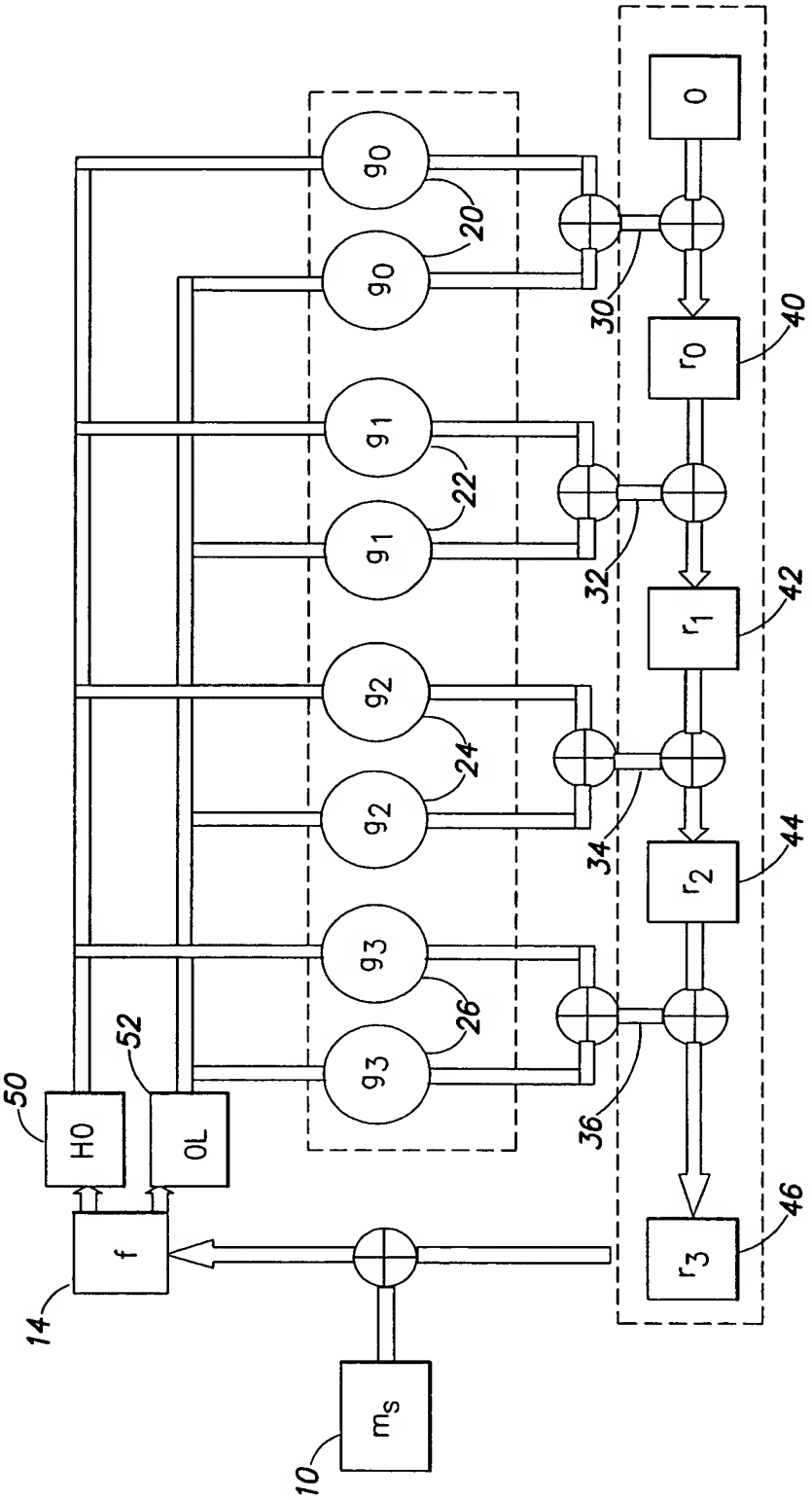

0
g_0
g_0
20
30
r_0
40
g_1
g_1
22
32
r_1
42
g_2
g_2
24
34
r_2
44
g_3
g_3
26
36
r_3
46
50
H0
52
0L
f
14
m_s
10

FIG. 2

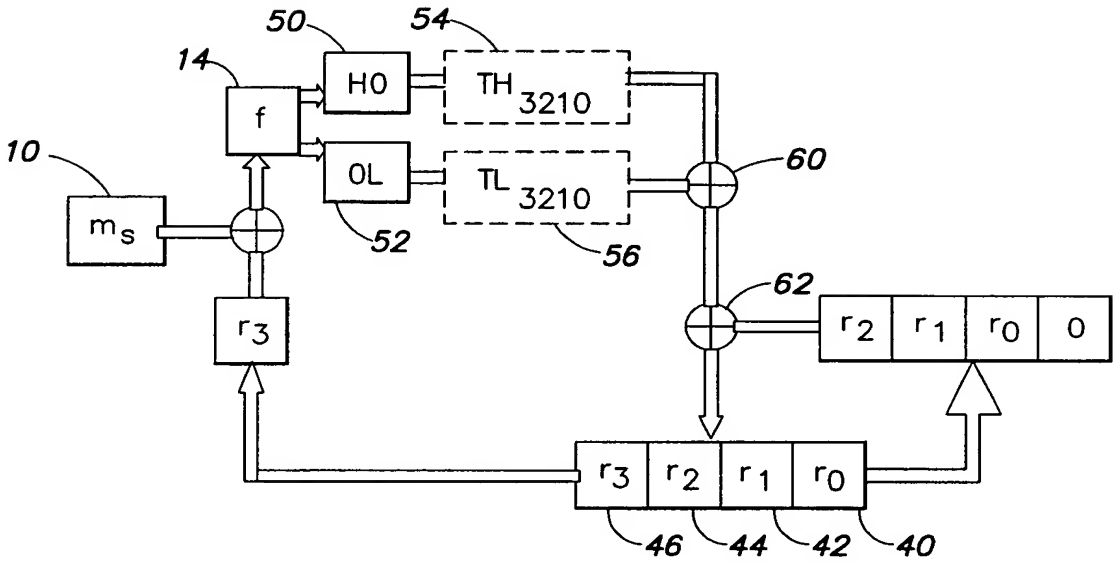
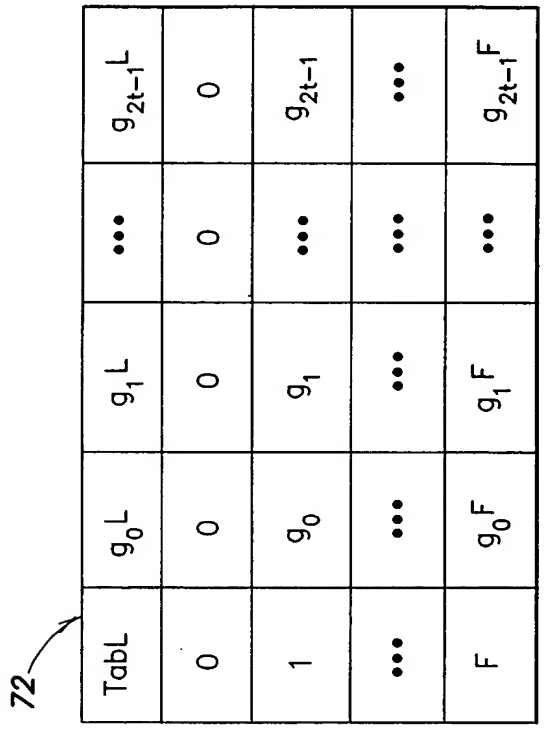

50
54
14
H0
TH 3210
f
10
OL
TL 3210
60
m_s
52
56
62
r_3
r_2 r_1 r_0 0
r_3 r_2 r_1 r_0
46
44
42
40

FIG. 3



TabL	g_0L	g_1L	...	$g_{2t-1}L$
0	0	0	0	0
1	g_0	g_1	...	g_{2t-1}
...	...	...	...	...
F	g_0F	g_1F	...	$g_{2t-1}F$

72

FIG. 4B

TabH	g_0H	g_1H	...	$g_{2t-1}H$
00	0	0	0	0
10	g_0*10	g_1*10	...	g_{2t-1}*10
...	...	...	...	...
F0	g_0*F0	g_1*F0	...	g_{2t-1}*F0

70

FIG. 4A

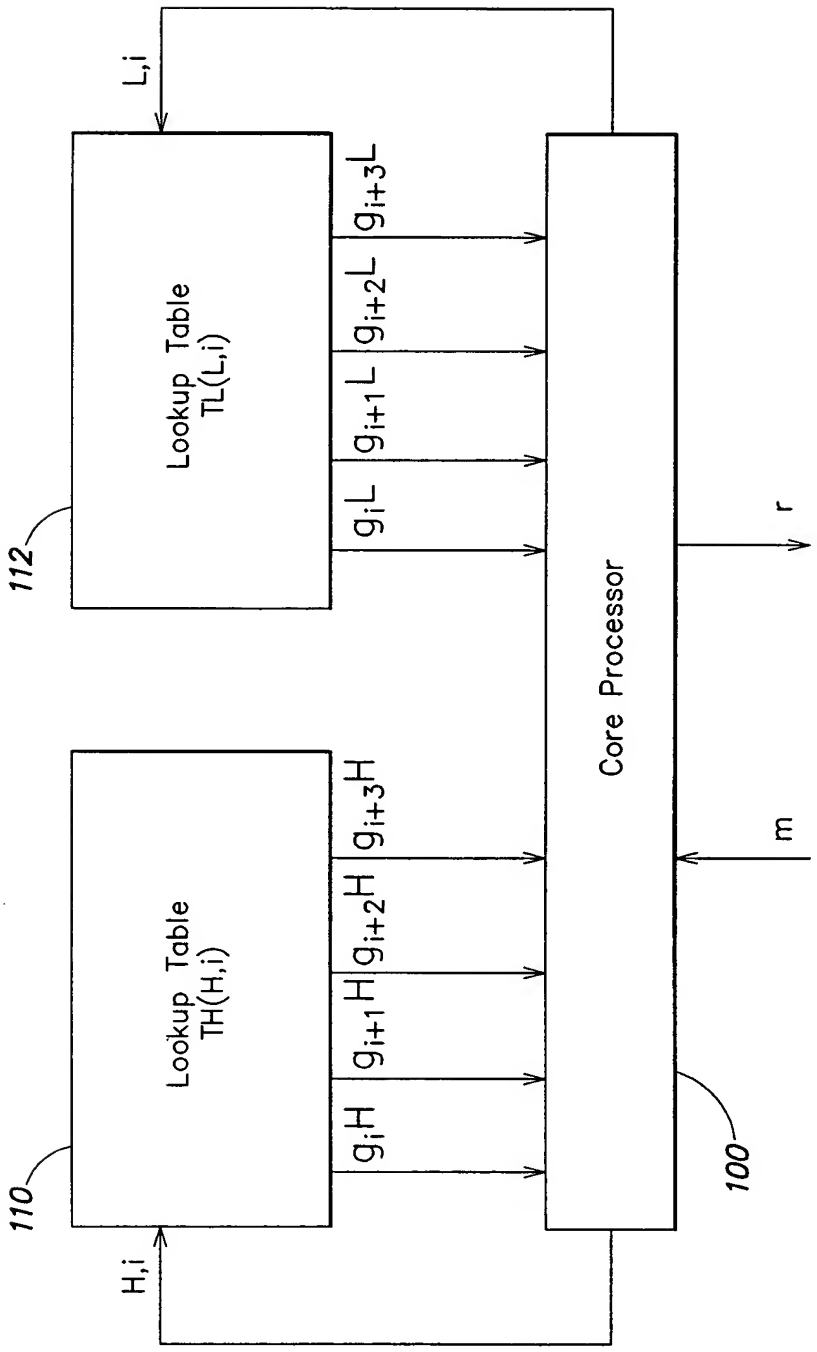

L,i
Lookup Table
TL(L,i)
112
$g_{i+3}L$
$g_{i+2}L$
$g_{i+1}L$
g_iL
r
Core Processor
m
Lookup Table
TH(H,i)
110
$g_{i+3}H$
$g_{i+2}H$
$g_{i+1}H$
g_iH
100
H,i

FIG. 5

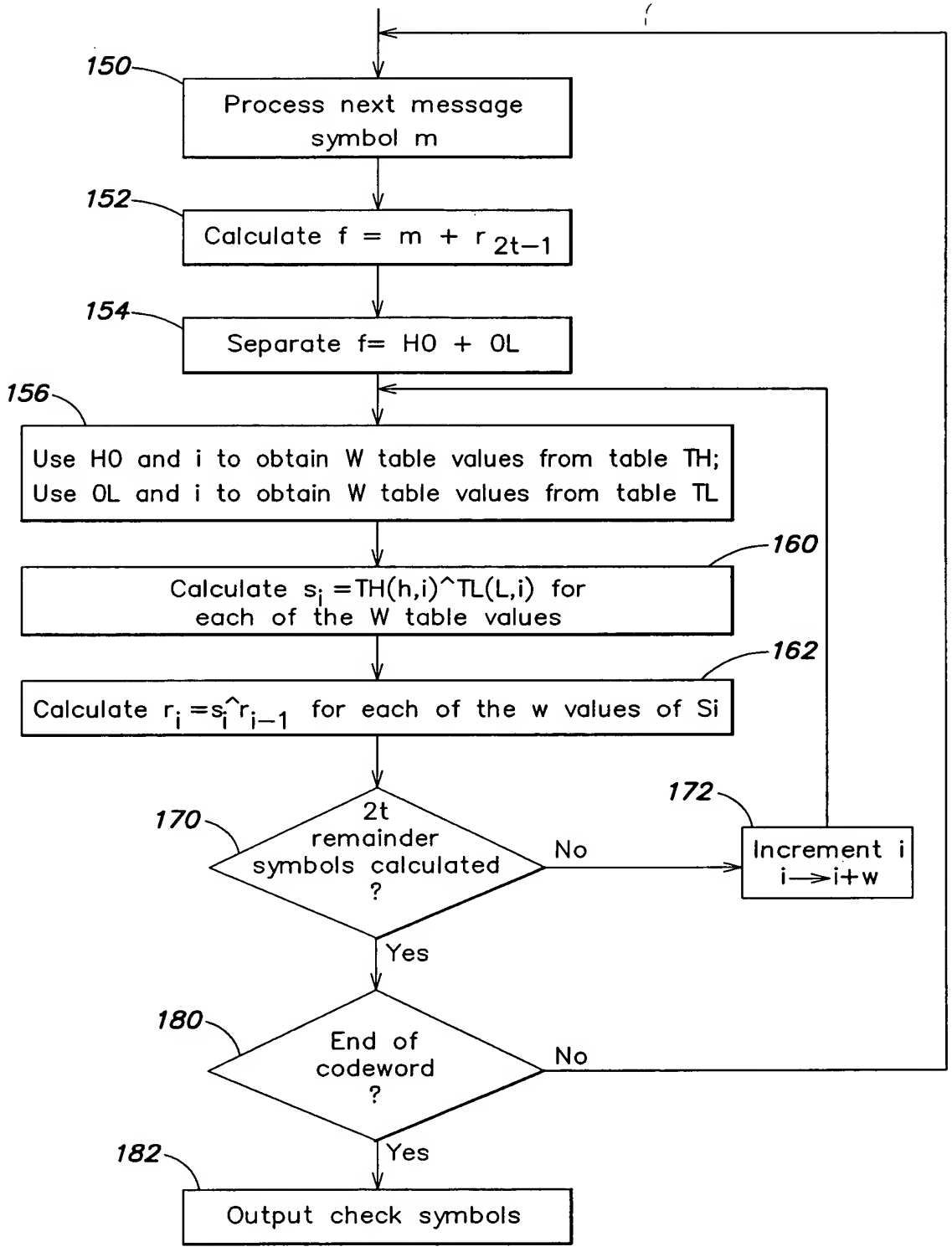

150
Process next message symbol m
152
Calculate f = m + r 2t−1
154
Separate f= H0 + 0L
156
Use H0 and i to obtain W table values from table TH;
Use 0L and i to obtain W table values from table TL
160
Calculate si =TH(h,i)^TL(L,i) for each of the W table values
162
Calculate ri =si^ri−1 for each of the w values of Si
170
2t remainder symbols calculated ?
No
172
Increment i
i→i+w
Yes
180
End of codeword ?
No
Yes
182
Output check symbols

FIG. 6